MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT) STANDARDS DEVELOPMENT INFORMATION COLLECTION REQUEST

Hardwood Plywood and Veneer

I. Instructions

This information request is to be completed for operations that comprise the plywood and particleboard manufacturing source category at your plant. The plywood and particleboard source category includes facilities that manufacture oriented strandboard (OSB), waferboard, hardboard, fiberboard, medium density fiberboard (MDF), particleboard (including particleboard made from straw and/or other agricultural fiber), hardwood and softwood plywood, hardwood and softwood veneer, laminated veneer lumber, and other engineered wood products. In addition, the plywood and particleboard source category may also include lumber drying kilns. Therefore, this survey is requesting information on lumber kilns which are located on the same site as (co-located with) a facility that manufactures any of the wood products mentioned above. This survey does not include stand-alone sawmill operations.

For purposes of this survey, hardwood plywood is considered to be a product made by gluing hardwood veneer to some wood-based substrate. The substrate could be additional layers of hardwood veneers, softwood plywood, particleboard, MDF, or another wood product. The information collected in this survey will allow the EPA to ascertain the types of wood products manufactured with hardwood veneers, and will assist the EPA in developing an appropriate definition of hardwood plywood.

We are requesting plant-specific information on operations at your facility that use or emit hazardous air pollutants (HAP's). Fill out this information request as completely as possible from existing information. At a minimum, provide information on the presence of HAP emissions. No additional monitoring or emission testing is required by your company to respond to this request. If the answer to a question is unknown (UK), unavailable (UA), or not applicable (NA), respondents should state whichever of these is applicable, rather than leaving the survey block blank.

The EPA understands that some of the requested information (e.g., annual production rates), may be considered confidential business information (CBI) by the survey respondents. As explained in the cover letter to this survey, EPA and its contractor will follow established procedures for protecting CBI. However, respondents must indicate which information in their survey responses they wish to claim as CBI. To assist the respondents, EPA has included a footnote at the bottom of each page of the survey that asks the respondent to indicate if the information entered on that page is confidential, nonconfidential, or partially confidential. Respondents that mark "partially confidential" are then asked to circle the specific responses that are considered CBI. Respondents should refer to the Enclosure 2 of the cover letter for information on what EPA considers CBI. For example, publicly available information and emissions data are not eligible for confidentiality claims.

If you have any questions regarding this request, please contact Ms. Penny Lassiter of EPA at (919) 541-5396 or by E-mail at lassiter.penny@epamail.epa.gov; Ms. Rebecca Nicholson of MRI at (919) 851-8181, ext. 5452 or bnicholson@mriresearch.org; or Ms. Katie Hanks of MRI at (919) 851-8181, ext. 5175 or khanks@mriresearch.org. For your convenience, we have provided in Attachment A additional information on the scope and purpose of this survey. Respondents should read this material before attempting to complete the survey. Attachment B is a copy of an example figure and example tables for the survey. Attachment C is a copy of the HAP list from Section 112(b) of the Clean Air Act. **Please note that careful review of Attachments A through C and the instructions and footnotes in the questionnaire below, may significantly reduce the amount of time needed to fill out this information request. Processes, equipment, and materials that are excluded from this survey are noted in the attachments, instructions, and footnotes.**

Return this information request and any additional information to:

Bruce C. Jordan, Director
Emission Standards Division (MD-13)
U. S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Research Triangle Park, NC 27711

Attention: Penny E. Lassiter

II. General Information

A. Name of plant: _____

B. Address of facility (mailing address and physical address if different):

_____

_____

_____

C. County where the facility is located: _____

D. Name of contact(s) able to answer questions about the completed survey:

_____

Title(s): _____

Telephone Number(s): (_____) _____

E-mail: _____

E. Name and address of legal owner of plant (if different than question A):

_____

_____

_____

F. Size of company:

1. Please indicate below the approximate number of employees (worldwide) in the business enterprise that owns this plant, including where applicable the parent company (specified in question E above) and all subsidiaries, branches, and unrelated establishments owned by the parent company.

__ <50 __ 100-249 __ 500-999 __ >1,500

__ 50-99 __ 250-499 __ 1,000-1,499

2. Please indicate below the total number of employees at all facilities located at this site.

__ <50 __ 100-249 __ 500-999 __ >1,500

__ 50-99 __ 250-499 __ 1,000-1,499

3. Are there any manufacturing operations at your facility that are not related to the production of veneer or plywood? If so, please describe the operations and indicate the number of employees associated with the operations.

_____

_____

_____

G. Products:

1. From the list provided below, please check the wood products manufactured at your facility.

__ Hardwood plywood
__ Hardwood veneer
__ Kiln-dried lumber
__ Other (please specify) _____
__ Other (please specify) _____

2. Please list the known major markets (such as furniture manufacture, marine vessels, housing, etc.) for the products manufactured at your plant (checked in question 1 above).

III. Process Description

A. Please provide a general description of the manufacturing process at your plant. Be sure to indicate in your description the numbers and types of processing equipment used (e.g., 2 lathes, 4 dryers, 1 plywood press). You may wish to prepare a block flow diagram to simplify your process description. If you have an "already-prepared" process description, equipment list, and/or process flow diagram (such as information supplied in a State permit application) you may attach the information rather than preparing a separate process description.

B. Please describe any planned expansions or additions of production equipment approved in the corporate budget for the next 5 years. Are any of the expansions or equipment additions expected to significantly change air emissions from the plant?

C. Describe any factors not addressed in the above questions that might distinguish your facility from other hardwood plywood or veneer plants.

_____
_____
_____
_____
_____
_____

IV. Veneer Plant Operations

Plants that <u>manufacture veneer</u> should complete this section. If you do not manufacture veneer, skip ahead to Section V.

A. List the approximate percentage of each wood species used to manufacture veneer at your plant in 1997:

_____
_____
_____

B. What was the gross annual production of veneer at your plant in 1997 (please provide units - such as 10 MMSF, 1/8-inch basis)? _____

C. What is the annual veneer production capacity of your plant (provide same units as in question B above)? _____

D. How many hours per day does the plant operate? _____ hours/day
How many days per week does the plant operate? _____ day/wk
How many weeks per year does the plant operate? _____ wk/yr

V. Veneer Dryers

Plants that dry hardwood or softwood veneer should complete this section. If you do not dry veneer, skip ahead to Section VI.

Please complete Table 1 for each of the veneer dryers at your plant. Make additional copies of the table if needed.

TABLE 1: VENEER DRYERS

VENEER DRYERS	DRYER NO. _____	DRYER NO. _____	DRYER NO. _____
1997 dryer throughput (provide units)			
Average 1997 dryer furnish, % hardwood % softwood			
Direct-fired, indirect-fired, or other (please explain)			
Dryer type: longitudinal, jet, or other (specify)			
Number of decks			
Number of zones			
Number of doors or sections			
Zone 1 temperature range, ^{o}F Zone 2 temperature range, ^{o}F Zone 3 temperature range, ^{o}F			
Exhaust gas flow rate, acfm @ ^{o}F[a, b]			
Percent moisture (by volume) in exhaust gas, %			
Are exhaust gases from the dryer recycled in any manner? If yes, indicate the following: - Percent recycled to blend chamber - Percent routed to combustion unit - Percent exhausted directly to atmosphere or to control device - Other percent (specify use)			
Type of air pollution control device or method (if any)[c]			

[a]Provide flow rate in units of actual cubic feet per minute (acfm) and specify gas temperature.
[b]If exhaust from each zone passes through a separate stack and is not combined downstream of the veneer dryer prior to entering the atmosphere, please provide exhaust flow rates for each zone.
[c]If you have an air pollution control device or method, please complete section IX.

VI. Lumber Kilns

Plywood and/or veneer plants that have a co-located sawmill with lumber kilns on the plant site should complete this section. If you do not have lumber kilns on the same site as your plywood or veneer plant, skip ahead to section VII.

A. How much dry lumber was dried in the lumber kilns at your plant in 1997 (please provide units - e.g., 20 MMBF)? _____

B. What is the annual lumber production capacity of your plant (provide same units as in question A above)? _____

C. How many co-located lumber kilns does the facility operate? _____
Complete Table 2 below for each of the lumber kilns.

TABLE 2: CO-LOCATED LUMBER KILNS

LUMBER KILNS	KILN NO. _____	KILN NO. _____	KILN NO. _____
1997 throughput, MBF/yr[a]			
1997 kiln furnish: average percent hardwood, % average percent softwood, %			
Firing method: Direct-fired or indirect-fired			
Range in lumber moisture: green lumber, % moisture, dry basis dried lumber, % moisture, dry basis			
Range of kiln drying cycle length, hr			
Total number of vents			
What percentage (if any) of kiln exhaust gases are recirculated to a combustion unit?			
Type of air pollution control device or method (if any)[b]			

[a]MBF/yr - thousand board feet per year
[b]If you have an air pollution control device or method, please complete section IX.

VII. Plywood Plant Operations

Plants that manufacture plywood should complete this section. If you do not manufacture plywood, skip ahead to Section VIII.

A. List the substrates (cores) used to manufacture plywood at your plant:

_____

_____

_____

B. What was the gross annual production of plywood at your plant in 1997 (please provide units - e.g., 60 MMSF-1/4-inch basis)? _____

C. What is the annual plywood production capacity of your plant (provide same units as in question 2 above)? _____

D. How many hours per day does the plant operate? _____ hours/day
How many days per week does the plant operate? _____ day/wk
How many weeks per year does the plant operate? _____ wk/yr

E. Please list the types and amounts of resins used in 1997 to manufacture hardwood plywood.
Example: liquid urea-formaldehyde resin - 14,500 gal/yr

_____

_____

_____

_____

_____

F. How many of the following types of hot presses does the facility operate?
_____ hot presses used to flatten veneers
_____ hot presses (typically multi-opening) used to cure resin in plywood panels

G. Please complete the following table for each of the hot presses (i.e., multi-opening hot presses used to cure plywood resin) you mentioned in question F above. Make additional copies of the table if needed.

TABLE 3: HOT PRESSES USED TO CURE PLYWOOD RESINS

PRESSES	PRESS NO. ____	PRESS NO. _____	PRESS NO. _____
Length (or range) of press cycle, min			
Board thickness range, in.			
Inlet board moisture content, % dry basis			
1997 press throughput, (provide units)			
Operating temperature range, ^{o}F			
Number of openings			
Opening size (length x width), ft			
Press heating method: hot oil, steam, or other (specify)			
Type of air pollution control device or method (if any)[a]			

[a]If you have an air pollution control device or method, please complete section IX.

H. Please describe the ventilation system in the area above the hot press(es) described in Table 3 above. Include in your description parameters such as the number of press vents, roof fans, and gas flow exhausted from the press area.

VIII. Facility Emissions

<u>All facilities</u> should complete this section.

A. In Table 4, list each unit operation at your facility that is a source of HAP emissions and has not already been listed in your response to this questionnaire. DO NOT include the dryers and presses that you have already listed in Tables 1, 2, or 3 above. Emission sources such as sanding and sawing operations and pneumatic conveying systems for wood material should NOT be listed in Table 4. If the exhaust gas flowrates from some unit operations that you list in Table 4 are unknown or cannot be accurately estimated, write "not available" in the flow rate column. Ranges of flow rates or moisture contents can be listed for sources with variable flows and moisture contents.

TABLE 4: FACILITY EMISSION SOURCE CHARACTERIZATION

Unit Operation/Emission Point	Average flow rate of gas stream, acfm @ ^{o}F	Percent moisture (by volume) in gas stream	Control device/method[a]

[a]If you have an air pollution control device or method, please complete section IX.

B. Emission Test Data:

1. Have any emission sources at your facility been tested for HAP's since *January 1, 1995*? (Check one)

   __ Yes (*Continue with Question 2, below.*)
   __ No (*Skip to Section IX, below.*)

2. Using Table 5, identify each emission point that has been tested for HAP's since January 1, 1995; describe the sampling location (e.g., "after the scrubber"); provide the date the tests took place; specify which pollutants were tested; and list the source test methods used to measure each pollutant.

3. Do the test report(s) include process data (e.g., dryer throughput) such that emission factors could be developed that relate emissions to process parameters such as production? (Check one)

   __ Yes (*Continue with Question 4, below.*)
   __ Some do, some don't (*Continue with Question 4, below.*)
   __ No (*Skip to Section IX, below. A copy of the test report is not required at this time, but may be requested at a later date*.)

4. Have the results of the HAP emissions tests performed since January 1, 1995 been submitted to (please check):

   a. EPA? __ Yes __ No
   If yes, list EPA Division/contact name: _____

   b. NCASI? __ Yes __ No

   If the answers to Questions 4a and 4b are both No, please submit a complete copy of the test report(s) with your response to this survey.

   If the answer to either Question 4a or 4b is Yes, a copy of the test report(s) is not required at this time, but may be requested at a later date.

TABLE 5. EMISSIONS DATA COLLECTED SINCE JANUARY 1, 1995[a]

TEST DATA	Test date: _____		Test date: _____		Test date: _____	
Name of unit operation or emission point tested						
Sampling location(s)[b]						
Pollutants (check pollutants tested and indicate test method used)	✓	Test Method Used	✓	Test Method Used	✓	Test Method Used
Methanol						
Formaldehyde						
Phenol						
Acetaldehyde						
Other HAP's (list below)						
PM/PM_{10}[c]						
VOC/THC[c]						

[a]Make additional copies of this table as needed.
[b]Sampling location refers to the point(s) at which the emissions were measured (e.g., before scrubber, directly after the product cyclone, etc.).
[c]For the purposes of Table 5, only those particulate matter (PM), volatile organic compound (VOC), and total hydrocarbon (THC) data that were measured concurrently with the HAP emissions test should be listed.

IX. Air Pollution Controls

If you indicated above that <u>your facility operates air pollution control devices</u>, you should complete this section. If you do not operate any air pollution control devices, you may skip this section.

Please complete Table 6 for each of the air pollution control device/method(s) used at your facility. If your facility uses a method to control air pollution emissions other than an add-on control device, please provide a detailed description of the air pollution control technique below. Do not list cyclones and baghouses for sanding or sawing operations; pneumatic conveying systems; or for wood material collection.

_____

_____

_____

_____

TABLE 6: AIR POLLUTION CONTROL DEVICES

CONTROL DEVICES	CONTROL ID _____	CONTROL ID _____	CONTROL ID _____
Control device type[a]			
Equipment controlled			
Manufacturer and model number			
Year installed			
Exhaust gas flow at control device inlet, acfm @ ^{o}F			
Pressure drop, in. H_2O			
Type of liquid used (e.g., caustic, pond water, etc. - if applicable)			
Liquid recirculation rate, gal/min (if applicable)			
Type of packing (if applicable)			
Solid material collected (provide only if material is not reused onsite), lb/yr - End use/method of disposal			
Blowdown generated, gal/min - Method of disposal			

[a]Please specify the type of control device, e.g., wet ESP, wet scrubber, baghouse, etc.